

1. (Amended) A method of making a set of labeled compounds, by the use of a support and a set of labels, said method comprising the steps of:

B<sup>2</sup> a) at least one first or intermediate step comprising dividing the support into lots, performing a different chemical reaction on each lot of the support so as either to modify that lot of the support or to couple a chemical moiety to that lot of the support, tagging a fraction of each lot of the support with a different label, and combining said lots of the support, and

b) at least one intermediate or final step comprising dividing the support into lots, performing a different chemical reaction on each lot of the support, so as either to modify that lot of the support or to couple a chemical moiety to that lot of the support, tagging a fraction of each lot of the support with a different cleavable label, wherein the label is cleavable to give a charged species for mass spectrometry, whereby each different cleavable label is linked to a chemical moiety coupled to the support in a different step and forms with that chemical moiety a labeled compound which is separable from the support, and combining the said lots of the support.

6. (Amended) The method of claim 5, wherein set of labeled compounds contains  $n \times s$  different labels.

B<sup>3</sup> 7. (Amended) The method of claim 1, wherein each labeled compound comprises a single label and at least one chemical moiety.

8. (Amended) The method of claim 1, wherein the support is treated to release said labeled compounds into solution.

B<sup>4</sup> 10. (Amended) The method of claim 1, wherein the support has cleavable linkers, wherein each cleavable linker has at least one group for chemical synthesis and another group for labeling.

14. (Amended) The method of claim 1, wherein the labeled compounds are labeled oligonucleotides.

B<sup>5</sup> 15. (Amended) A set of labeled compounds wherein a molecule of a compound of the set is tagged with a single cleavable label which identifies the nature and/or the position of a

B5  
COO<sup>-</sup> component of that molecule, whereby each label is cleavable to give a charged species for mass spectrometry, and different molecules of the same compound are tagged with different labels.

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B6  
22. (Amended) The set of claim 15, wherein the labeled compounds are labeled oligonucleotides.

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23. (Amended) A library consisting of the set of labeled compounds of claim 19.

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67. (Amended) A library consisting of the set of labeled compounds of claim 20.

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68. (Amended) A library consisting of the set of labeled compounds of claim 21.

69. (Amended) A library consisting of the set of labeled compounds of claim 22.

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